FLUID DIFFUSION LAYERS FOR FUEL CELLS

Abstract

Fluid diffusion layers with favorable mechanical and electrical properties are prepared for fuel cell electrodes by impregnating a porous carbonaceous web with a carbonizable polymer having pyrrolidone functionality and then carbonizing the pyrrolidone polymer. The polymer having pyrrolidone functionality is stabilized against vaporization by use of an oxidization step prior to carbonization. The fluid diffusion layers are particularly suitable for use as gas diffusion layers in solid polymer electrolyte fuel cells.